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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,867	05/28/2002	Peter Wirtz	WIRTZ ET AL -I PCT	5687
25889	7590	10/19/2006	EXAMINER	
WILLIAM COLLARD COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			RUDDOCK, ULA CORINNA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,867

Applicant(s)

WIRTZ ET AL.

Examiner

Ula C. Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-27 and 29-33 is/are pending in the application.
- 4a) Of the above claim(s) 24-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-23, 29-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendment and accompanying remarks filed August 7, 2006. In view of Applicant's response, all previously set forth rejections have been withdrawn. However, after an updated search, additional prior art has been found which renders the invention as currently claimed unpatentable for reasons herein below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 17-23 and 29-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 discloses a plurality of "metal wires" and a plurality of "metal fiber threads" wherein "each metal wire thread" comprises a fiber bundle. However, it is unclear what is meant by "metal wire thread" when the only two terms described in the claim are "metal wires" and "metal fiber threads." Furthermore, in claim 29, Applicant discloses a "bundle of fibers, each fiber having a diameter less than 100 μm ." However, it is unclear whether the "bundle of fibers" is different from the "metal fiber thread." The remaining dependent claims are rejected as being dependent upon a rejected base claim. Clarification/correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-23 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pall et al. (US 3,327,866) in view of Halker (US 4,948,658). Pall et al. disclose a woven wire mesh for use in filters (col 1, ln 8-9). The wires are usually monofilaments, which are preferred for filter uses (col 4, ln 71-72). The filter media can be a depth filter (col 1, ln 50-52). The warp diameter is larger than the shoot (i.e. weft) diameter (Table 2). The wire mesh can be woven of wires of any metal, preferably stainless steel (col 4, ln 58-63). The wire mesh can be used as filters in single or multiple layers (col 5, ln 55-56). Pall et al. disclose the claimed invention except for the teaching that a plurality of metal fibers threads are worked in between the metal wires.

Halker (US 4,948,658) disclose a material for use as a filter (abstract) wherein filter threads are inserted to provide the core filaments. Metal fibers may be inserted into the material (col 2, ln 42-48). It would have been obvious to one having ordinary skill in the art to have inserted Halker's metal fibers into the woven wire mesh of Pall et al., motivated by the desire to create a filter having improved filtration properties.

Regarding Applicant's limitations in claims 17, 29, and 30, it has been held that fiber diameter and fiber density are result effective variables. For example, the diameter of a fiber directly affects the strength of the fiber and fabric. The number of fibers in a thread directly affects

the stability of the fabric. Therefore, it would have been obvious to one having ordinary skill in the art to have made the fibers have a diameter less than 100 μm or 30 μm , to have made the fiber thread have more than 100 fibers or 500 fibers, and to have made the metal fiber thread have a larger diameter than the metal wire, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized the fiber diameter and fiber density, motivated by the desire to create a mesh with the desired filtration properties.

Regarding claim 19, it would have been obvious to one having ordinary skill in the art to have made the metal wires constitute the warp and the metal fiber threads constitute the weft of the cloth, motivated by the desire to create dimensional stability in a desired direction.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UCR *UCR*

Ula Ruddock
Ula C. Ruddock
Primary Examiner
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